

REMARKS

Claims 1-168 are pending in the subject application. Claims 1-54, 105-107, 126-152 and 168 have been withdrawn from consideration. No claim has been indicated to be allowable.

Affirmation of Election

Applicants hereby affirm their election with traverse to prosecute the invention drawn to Group II, claims 55-104, 108-125 and 153-167.

Claims Objections

Claims 57 stand objected to because the phrase “the total catalyst inventor” lacks literal antecedent basis. Claims 57 has been amended to delete the offending phrase. Consequently, Applicants petition for withdrawal of the objection to the claims.

35 USC 112

Claims 58-63, 74, 75, 80 and 81 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is respectfully traversed.

The Examiner has alleged that the phrase “the composition” in Claims 58-63, 74, 75, 80 and 81 is unclear. Accordingly, these claims have now been amended to recite the composition in a clear and definite manner. The Examiner has also suggested that Claim 60 is indefinite as encompassing amounts of catalyst/additive zeolite that are outside the ranges referred to in Claim 55 from which claims 60 depends. Claim 60 has now been amended to clearly recite a range that is within the range as claimed in Claim 55.

Consequently, for reasons as stated hereinabove, Applicants’ invention, as now claimed, is written in a clear and concise manner. Accordingly, this rejection is moot and should now be withdrawn.

35 USC 102

Claims 55-104, 108-125 and 153-167 stand rejected under 35 USC 102(e) as being anticipated by Kuvetta et al (US 2003/166453 A). This rejection is respectfully traversed.

Applicants' invention, as now claimed, recites a fluid cracking catalyst (FCC) composition which comprises a particulate FCC cracking component suitable for catalyzing the cracking of hydrocarbons under FCC conditions, mixed with a particulate NO_x reduction catalyst/additive component. In one embodiment of Applicants' invention the cracking component and the NO_x reduction component are separate particles. The cracking component is preferably a Y type zeolite. The NO_x reduction component have a mean particle size of greater than 45 μm and comprises at least 10 weight percent of NO_x reduction zeolite component selected from the group consisting of ZSM-11, beta, MCM-49, mordenite, MCM-56, Zeolite-L, zeolite Rho, errionite, chabazite, clinoptilolite, MCM-22, MCM-35, MCM-61, Offretite, A, ZSM-12, ZSM-23, ZSM-18, ZSM-22, ZSM-57, ZSM-61, ZK-5, NaJ, Nu-87, Cit-1, SSZ-35, SSZ-48, SSZ-44, SSZ-23, Dachiardite, Merlinoite, Lovdarite, Levyne, Laumontite, Epistilbite, Gmelonite, Gismondine, Cancrinite, Brewsterite, Stilbite, Paulingite, Goosecreekite, Natrolite, omega or mixtures thereof, and about 5 to about 50 weight percent of an inorganic binder selected from the group consisting of alumina, silica, silica alumina, alumina phosphate, and mixtures thereof.

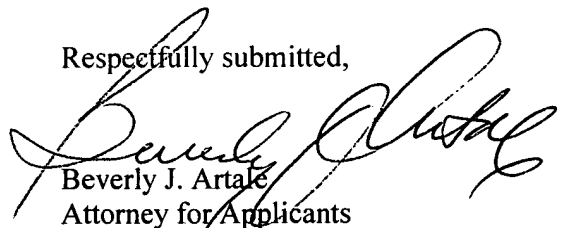
In an alternative embodiment of Applicants' invention, the FCC cracking component and a NO_x reduction catalyst/additive component may be an integral particle. According to this embodiment, the NO_x reduction catalyst/additive component comprises a NO_x reduction zeolite, wherein the zeolite is stabilized with at least one stabilizing metal selected from the group consisting of Groups 3B, 2A, 2B, 3A and the Lanthanide Series of the Periodic Table, and mixtures thereof.

Kuvetta et al. discloses a catalyst comprising a low silica zeolite, a high silica zeolite and silica alumina binder. Kuvetta et al. provides for a stabilized dual zeolite, low coke bonded with a silica alumina binder. **Kuvetta et al. requires that the catalyst forms a single particle** (see col. 4, line 46-48). The catalyst is suitable for cracking heavy residual hydrocarbon feeds and having

enhanced hydrothermal stability. Notedly, Kuvetta et al. teaches to stabilize the catalyst with phosphate compounds.

Clearly, Kuvetta et al fail to disclose a catalyst system having a **dual** particulate composition as now claimed by Applicants', e.g. a particulate FCC catalyst in combination with a particulate NO_x reduction component. Where the Applicants' catalyst composition is a single particulate composition, Kuvetta, clearly fails to disclose a NO_x reduction catalyst/additive component containing a NO_x reduction zeolite which has been stabilized with a metal component as claimed by Applicants. Consequently, Kuvetta et al fail to anticipate Applicants' invention by failing to teach each and every element thereof. Consequently, this rejection is improper and should be withdrawn.

Respectfully submitted,



Beverly J. Artale
Attorney for Applicants
Reg. No. 32,366

Tel: (410) 531-4769
W.R. Grace & Co.-Conn.
7500 Grace Drive
Columbia, Maryland 21044